

1. A method of constructing a composite structure for use with at least one semiconductor device, comprising the steps of:
 - providing at least one electrical conductor to form a portion of an electrical network;
 - providing at least one thermal conductor to form a portion of a thermal network; and
 - applying a dielectric material to said electrical conductor by forming a direct covalent bond at a temperature less than 475 degrees C between said electrical conductor and said dielectric material, said thermal network and said electrical network being encompassed by said dielectric material.
2. The method of constructing a composite structure as defined in claim 1 further comprising the step of providing at least one capacitor within said dielectric material prior to the step of applying said dielectric material, said at least one capacitor being electrically connected between said electrical network and a conductive member.
3. The method of constructing a composite structure as defined in claim 1 further comprising the step of providing said electrical network with at least one conductive wire segment and electrically isolating said electrical network and said thermal network.
4. The method of constructing a composite structure as defined in claim 1 further comprising the step of affixing said thermal network to a mounting support prior to the step of applying said dielectric material.
5. The method of constructing a composite structure as defined in claim 1 further comprising the step of selectively removing portions of a major surface of said electrical conductor to define at least one electrode area for mounting the semiconductor device thereon.
6. The method of constructing a composite structure as defined in claim 1 wherein said dielectric material comprises an alumina-based ceramic.

7. The method of constructing a composite structure as defined in claim 1 wherein said dielectric material comprises an organo-ceramic.
8. The method of constructing a composite structure as defined in claim 1 further comprising the step forming the composite structure by spray pyrolyzing a solution of metalorganic carboxylic acid salt precursors containing polyvinyl butyral.
9. The method of constructing a composite structure as defined in claim 1 wherein said dielectric material comprises a silica-based ceramic.
10. The method of constructing a composite structure as defined in claim 1 further comprising the step of electrically connecting the at least one semiconductor device to said electrical conductor.
11. The method of constructing a composite structure as defined in claim 1 further comprising connecting the at least one semiconductor device to said electrical conductor and to said thermal conductor.